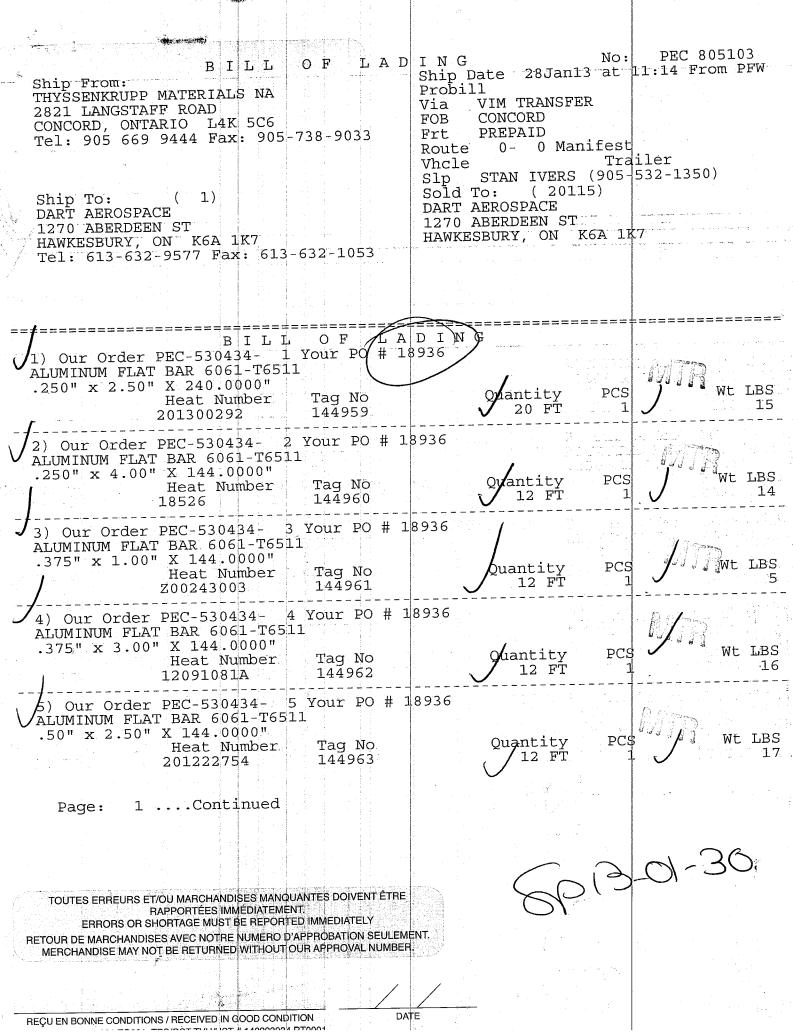
Date: Supple Packing Slip: Invoice: Receipt:	Yes No	1-30 Senkru	Batch No: Dart P/O Release Note Att Vaybill Attached Shipment Comp	ached: Yes Z	B	NIA
Part	Description	Quantit Ordere			antity (Short	Comments
Number		Ordere	u Received	Returned	SHOIL	
· <del></del>						
		Initi	als of receiver	(if shipment OK)	Level 12	
Production/Ad Date Received/Cost Initial	ting /	⊃ 1-30			Location	01
H:\FORMS\Purcha	sing\approved purch	h\RECREPORT Re	/D	2		
For the Land		- Property of the second	2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	/		
				VendorID\Vendor Name PO18936 1 CAD No	Purchase Order,ID/ Curr Type	Purchase Order  Wednesday, January 30  All Vendors PO ID P  All Item ID/GL/WOs  Grouped by Vendor ID
S 0	No S	4 Z	3 No		Line Project ID Nbr/ Insp Req	Purchase Order Receipt Listi Wednesday, January 30, 2013 7:55:07 AM All Vendors PO ID PO18936 Receipt I All Item ID/GL/WOs All Rec. Employee: Grouped by Vendor ID
124443 M6061T6B0.750X0 750 6061-T6 Bar .750 x .750 124443	3.00 124443 M6061T6B0.500X03 500 6061-T6 Bar .500 x 2.50	6061T6 BAR .375 x 1.00 124443 M6061T6B0.375X03 000 6061T6 BAR .375 X	000 6061-T6 Bar .250 x 4.00 124443 M6061T6B0.375X01	VC-COP001 Thyssent M6061T6B0.250X02. 500 6061-T6 Bar 0.25 x 2.50 124443 M6061T6B0.250X04	Reference/ Description/ Cert Std	v a
.750X0 .750 x	500X02	375 x 75X03 375 X	50 x 75X01.	Thyssenki .250X02. 1 .0.25 x .0.25 x ).250X04.	70 FG	tes fro

																						CAD	VendorID\Vendor Name PO18936 7	Purchase Order ID/ Curr Type
	No	14		N <sub>o</sub>	13		N N	12		No	11		No	10		N N	9		No	<b>∞</b>		N <sub>O</sub>	idor Nam 7	Line Nbr/ Insp Req
					* * * * * * * * * * * * * * * * * * *																			Project ID
124443	6061-T6 Bar 2.00 x	M6061T6B2.000X02. f	1.23 124443	6061-T6 Bar 1.25 x	M6061T6B1.250X01. f	124443	6061-T6 Bar 1.00 x	M6061T6B1.000X15. f	124443	6061-T6 Bar 1.00 x 12.00	M6061T6B1.000X12. f	124443	6061-T6 Bar 1.00 x	M6061T6B1.000X02. f	124443	6061-T6 Bar 1.00 x 2.00	M6061T6B1.000X02. f	.125 124443	6061-T6 Bar .750 x	M6061T6B00750X00 f	4.00 124443	6061-T6 Bar .750 x	VC-COP001 Thyssenkr M6061T6B0.750X04. f 000	Reference/ Description/ Cert Std
	2.00 x f	.000X02. f		1.25 x f	.250X01. f		1.00 x f	000X15. f		1.00 x f	000X12. f		1.00 x f	000X02. f		1.00 x f	000X02. f		750 x f	750X00 f		750 x f	Thyssenkrupp Materials CA Ltd .750X04. f	PO U/M / Stock U/M
	36.0000	1/30/2013		48.0000	1/30/2013		12.5000	1/30/2013		12.5000	1/30/2013		12.0000	1/30/2013		36.0000	1/30/2013		100.0000	1/30/2013		12.0000	1/	Required Date Required Qty
	0 DESJ02	3 1/30/2013		0 DESJ02	3 1/30/2013		0 DESJ02	3 1/30/2013		DESJ02	3 1/30/2013		) DESJ02	1/30/2013		) DESJ02	1/30/2013		DESJ02	1/30/2013		DESJ02	1/.	Recv Date/ Recv Emp
		36.0000			48.0000			12.5000			12.0000			12.0000			36,0000			100.0000		A PROPERTY AND ADMINISTRAÇÃO DE ACASTRAÇÃO DE ACATRAÇÃO DE ACASTRAÇÃO DE ACATRAÇÃO DE ACATRAÇÃO DE ACATRADA DE ACATRADA ACATRA DE ACATRADA DE ACATRADA DE ACATRADA ACATRA DE ACATRADA ACATRADA ACATRA DE ACATRADA ACATRA DE ACATRADA	12.0000	Recv Qty (PO U/M)
	\$339.72	\$9.44		\$176.91	\$3.69		\$599.79	\$47.98	•	\$340.55	\$28.38		\$70.36	\$5.86		\$175.49	\$4.87		\$35.68	\$0.36		\$86.44	\$7.20	Cost Per Unit/ Recv Value
	0.0000			0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	-	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	Inspected Qty/ Rejected Qty (PO U/M)
	0			0 0	0 0		0	0		. 0			) 0			0	0		0			0		MRB Qty/ MRB Reject Qty
		\$339.72			\$176.91			\$399,79	*500.70		\$340.33	93.40 11		\$/0.36			\$175.49	3		\$33.00	77.5		\$86.44	Book Amt

,		No	17	No	16		CAD No	VendorID\Vendor Name PO18936 15	Purchase Line Order ID/ Nbr/ Curr Type Insp Req
		- 6 - 2	S 7	- × 6	© 7	= =	61	VC-C	Project ID R D C
	í	6061-T6 Bar 1.50 x f 2.50 124443	M6061T6B1.500X02. f 500	6061-T6 BAR 2.00' f X 8.00" 124443	M6061T6B2.000X08. f	124443	6061-T6 Bar 1.50 x f	T6B1	Reference/ Description/ Cert Std
		×	⟨02. f	O f	(08. f		x f	Thyssenkrupp Materials CA Ltd .500X01. f	PO U/M / Stock U/M
H. ALA, A. A. A. B. SERIA D. A. B. SERIA B. A. A. B. SERIA B. A. A. B. SERIA B. S. B		36.0000	1/30/2013	12.0000	1/30/2013		36.0000		Required Date Required Qty
		DESJ02	1/30/2013	DESJ02	1/30/2013 1/30/2013		DESJ02	1/30/2013 1/30/2013	Recv Date/ Recv Emp
		•	36.0000		12.0000			36.0000	Recv Qty (PO U/M)
	Tota	\$319.62	\$8.88	\$454.31	\$37.86		\$164.64	\$4.57	Cost Per Unit/ Recv Value
Total Receipt Value:	Total Received Quantity: Total Qty to Inspect (PO U/M): Total Reject Quantity:	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	Inspected Qty/ Rejected Qty (PO U/M)
pt Value:	Quantity: O U/M): Quantity:	c		C			0	0	MRB Qty/ MRB Reject Qty
\$2,916.28 0 5000	432.5000 0.0000 0.0000		\$319.62		\$454.31			\$164.64	Book Amt



B I L L O F L A D Ship From: THYSSENKRUPP MATERIALS NA 2821 LANGSTAFF ROAD CONCORD, ONTARIO L4K Tel: 905 669 9444 Fax: 905-738-9033  Ship To: (1) DART AEROSPACE	I N G No: PEC 805103 Ship Date 28Jan13 at 11:14 From PFW Probill Via VIM TRANSFER FOB CONCORD Frt PREPAID Route 0- 0 Manifest Vhcle Trailer Slp STAN IVERS (905-532-1350) Sold To: (20115) DART AEROSPACE
BILL OF LA	D I N G
Our Order PEC-530434- 6 Your PO # 1 ALUMINUM SQUARE BAR 6061-T6511 .750" X 144.0000" Heat Number Tag No 12090031A 144964	8936 Quantity PCS Wt LBS 12 FT 1
7) Our Order PEC-530434- 7 Your PO # 1 ALUMINUM FLAT BAR 6061-T6511 .750" x 4.00" X 144.0000" Heat Number Tag No 201221010 144965	0 Quantity PCS Wt LBS. 12 FT 1 43
8) Our Order PEC-530434- 8 Your PO # 1 ALUMINUM FLAT BAR 6061-T6511 .125" x .750" X 240.0000" Heat Number Tag No 12110331A 144966	Quantity PCS Wt LBS
a) Our Order PEC-530434- 9 Your PO # 1 ALUMINUM FLAT BAR 6061-T6511 1.00" x 2.00" X 144.0000" Heat Number Tag No 201221186 144967	Quantity PCS Wt LBS 36 FT 3
10) Our Order PEC-530434- 10 Your PO # ALUMINUM FLAT BAR 6061-T6511 1.00" x 2.50" X 144.0000" Heat Number Tag No 2BS870 144968	Quantity PCS Wt LBS 12 FT 1 35
11) Our Order PEC-530434- 11 Your PO # ALUMINUM FLT BAR ECONOPLT 6061-T6511 1.00" X 12.00" X 144.5000" Heat Number Tag No	18936 Quantity PCS Wt LBS
Page: 2Continued	
TOUTES ERREURS ET/OU MARCHANDISES MANQUANTES DOIVENT ÊTRE RAPPORTÉES IMMÉDIATEMENT. ERRORS OR SHORTAGE MUST BE REPORTED IMMEDIATELY RETOUR DE MARCHANDISES AVEC NOTRE NÚMERO D'APPROBATION SEULEM MERCHANDISE MAY NOT BE RETURNED WITHOUT OUR APPROVAL NÚMBE	AENT.
REÇU EN BONNE CONDITIONS / RECEIVED IN GOOD CONDITION DA	ATE

B I Ship From: THYSSENKRUPP MATERIAL 2821 LANGSTAFF ROAD CONCORD, ONTARIO L4K Tel: 905 669 9444 Fax Ship To: (1) DART AEROSPACE	5C6		Probi Via FOB Frt Route Vhcle Slp Sold	Date 28Jani 11 VIM TRANSFE CONCORD PREPAID 0 0 Man	R ifest Tra (905-	11:14 From PFW
======================================	I L L O 1 14!	F LA	D J N 12	======================================	:==== 1\	170
20122156 12) Our Order PEC-5304	<del> </del>	<del>-</del>	<u> </u>			F. Parma
ALUMINUM PLATE 6061-T	651 " X 144.50 mber   Ta	00"		Quantity 15.05 SFT	PCS 1	Wt LBS 219
13) Our Order PEC-5304 ALUMINUM SQUARE BAR 6 1.250" X 144.0000" Heat Nu 2BR922	mber Ta	Albertan State of Sta	8936	Quantity 48 FT	PCS 4	Wt LBS
J14) Our Order PEC-5304 ALUMINUM FLAT BAR 606 1.250" x 1.50" X 144. Heat Nu Z0026102	1-16511 0000" mber Ta		8936	Quantity 36 FT	PCS 3	Wt LBS
15) Our Order PEC-5304 ALUMINUM SQUARE BAR 6 2.00" X 144.0000" Heat Nu 20121989	umber Ta	r PO # 1 g No 4971	8936	Quantity 36 FT	PCS 3	Wt LBS 172
16) Our Order PEC-5304 ALUMINUM FLAT BAR 606 2.00" X 8.00" X 144.0 Heat No 20120158	31-T6511 0000" imber Ta	ir PO # 3 ag No 14972	8936	Quantity 12 FT	PCS 1	Wt LBS
17) Our Order PEC-5304 ALUMINUM FLAT BAR 600 1.50" x 2.50" X 144.0	31-T6511	ir PO #	18936			
Page: 3Cont	inued				ا کر	30
TOUTES ERREURS ET/OU MARCHAND RAPPORTÉES IMI ERRORS OR SHORTAGE MUST RETOUR DE MARCHANDISES AVEC NOTRE MERCHANDISE MAY NOT BE RETURNEI	MEDIATEMENT. BE REPORTED IMME NUMERO D'APPROI	EDIATELY BATION SEULEM	IENT.	GR'		
REÇU EN BONNE CONDITIONS / RECEIVED IN	GOOD CONDITION	DA	TE .			

Ship From: THYSSENKRUPP 2821 LANGSTA CONCORD, ONT Tel: 905 669 Ship To: DART AEROSPA	MATERIA FF ROAD PARIO L 9444 F	4K 5C6 ax: 905			Probil Via FOB Frt Route Vhcle Slp Sold	VIM TRANS CONCORD PREPAID 0- 0 M STAN IVER	FER anifest Tra S (905-	11:14 Fr iler	
	Heat N 2BR823	B I L ] Jumber	O F Tag No 14497		DINO	Quantity 36 FT	PCS 3		Wt LBS 158
					TOTAL	Tags : 17	PCS 32		LBS 1361
Heat Number 09/10/026C0 12090031A 12091081A 12110331A 18526 201201586 201219894 201221010 201221186 201221564 201222754 201300292 2BR823 2BR922 2BS870 Z00243003 Z00261029  MILL TEST REPOWITH MATERIAL TO SHIPPING.	ORTS, PA AND FAX	CKING	mical An	· TO S	ENT			30	
ATTN: CHANTAL,  ** ALL PACKING  ** REFERENCED	3 SLIPS	MUST HA	VE THE	IEAT N	JUMBER ?	**	• • .	-	
TOTAL 4 BDLS (	G.W. 180	7 LBS							•
Page: 4	Cor	tinued							
TOUTES ERREURS E ERRORS OR RETOUR DE MARCHAND MERCHANDISE MAY N	RAPPORTÉES SHORTAGE MU ISES AVEC NO	IMMEDIATEN IST BE REPOI TRE NUMERO	IENT. RTED IMMEDIATI D'APPROBATIO	≣LÝ N SEULEM	ENT				

REÇU EN BONNE CONDITIONS / RECEIVED IN GOOD CONDITION

DATE

PEC 805103 No: LAD ING 0 F BILL Ship Date 28Jan13 at 11:14 From PFW Ship From: Probill THYSSENKRUPP MATERIALS NA Via VIM TRANSFER 2821 LANGSTAFF ROAD CONCORD FOB CONCORD, ONTARIO L4K 5C6 PREPAID Frt Tel: 905 669 9444 Fax: 905-738-9033 0- 0 Manifest Route Trailer Vhcle STAN IVERS (905-532-1350) Slp Sold To: (20115) Ship To: DART AEROSPACE 1) DART AEROSPACE LADING OF BILL ITEMS (1,8) BDL ITEMS (2-7 AND 9,10 AND 13-17) BDL Andrew Color a ITEM (11) BDL ITEM (12) BDL

3 4 5 B 35 3

\*\*\* 9:00 AM TO 4:00 PM \*\*\*

\*CUSTOMER PICK-UP HRS AT THYSSENKRUPP MATERIALS NA

Page: 5 .... Last

CONCORD, ONT.\*

TOUTES ERREURS ET/OU MARCHANDISES MANQUANTES DOIVENT ÊTRE
RAPPORTÉES IMMÉDIATEMENT.
ERRORS OR SHORTAGE MUST BE REPORTED IMMEDIATELY
RETOUR DE MARCHANDISES AVEC NOTRE NUMERO D'APPROBATION SEULEMENT.
MERCHANDISE MAY NOT BE RETURNED WITHOUT OUR APPROVAL NUMBER.

ALUMINUM FLAT BAR 6061.T6511 .250" x 2.50" X 240.0000" PART NO. DART AEROSPACE

PO/Rel 18936

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.

Certificate of Mill Test Results

Signed by:

BL PEC-805103-001

Pg 1/1 28Jan13



### SERVICE CENTER METALS 5850 Quality Way

Prince George, VA 23875

## CERTIFIED INSPECTION REPORT AND TEST RESULTS FOR EXTRUDED PRODUCTS

BILL TO SHIP TO ThyssenKrupp Materials NA PEC ThyssenKrupp Materials NA Quantity Certified 1,514 lbs 103pcs CUSTOMER PART NUMBER CUSTOMER PO MANWEST NUMBER RB0074 X 240 PEC-244917 178979 SCRB .250x2.500 DESCRIPTION DIE NUMBER ALLOY / TEMPER 6061-T6511 **RB0074** SALESPERSON DATE OF SHIPMENT David Schroeder 1/16/2013 OUR ORDER NUMBER AMS-QQA-200/8 SPECIFICATION CERTIFICATION ASTM-B221-12 StencilContinuous 166508 \_

We hereby certify that the material covered by this report has been inspected in accordance with the most recent certification revision, and has been found to meet the applicable requirements described herein, including any specifications forming a part of the description, and that samples representative of the material met the composition limits and had the mechanical properties shown. SCM extrusions are manufactured in the USA.

also meet the requirements of 6061-T6 Rems produced and certified as 6061-T6511

	1 201300292 2 201300292	Injection of the line of the l
13/0H) 3	° 8⊅	
	01/12/13 01/12/13	Test Date
	44.9 42.4	Ultimate Tensile Strength (KSI)
	42.2 40.0	Yield Strength (KSI)
	14.0 12.9	<u>Percent</u> <u>Elongation</u>

Chemical Composition for Aluminum Alloy 6061

122312 Cast Number Alloy 66 63 0.63 S 0.18 Fe 0.17 5 S 0.00 동 0.850.05 뎐 Ŋ 0.00 0.01 1 98.11 Each Others <u>Total</u> 0.15 Print Date: 1/16/2013 Qatar (Hydro) Melt Source:

ALUMINUM FLAT BAR 6061-T6511 .250" x 4.00" X 144.0000"

PO/Rel 18936
We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.

Signed by:

**Certificate of Mill Test Results** 

BL PEC-805103-002

28Jan 13

Pg 1/1

### EXTRUDEX ALLMINUM

411 CHRISLEA ROAD, WOODBRIDGE, ONTARIO, CANADA L4L 8N4 TEL: (416)745-4444 FAX:(416)745-0925 1-800-668-7210

http://www.extrudex.com

Cast Number	<b>Chemical Composition</b>	A11	<u></u>	<b>Mechanical Properties</b>	MILL TEST REPORT  BILL TO THYSSENKRUPP MATERIALS, NA SHIP TO THYSSENKRUPP MATERIALS, NA SO DESCRIPTOW 250"x4" FB
		6061	Alloy		RT BALS,NA
<u> ଊ</u>					
<u>Si</u>					Chrt Cade: 1 CUSTOME
5 C					CPH Code:  1  1  CUSTOMER PO PEC-24255  CUSTOMER PART NUMBER 1-250-4000
S .		Q	l <del>,</del>		ER PART NUMBER 1-250-4000
Mg		Oct/16/12	Test Date		0,49 50 6
cr ni zn	ı				DHE NUMBER S ALLOY 6061 PART DESCR
<u> Z</u>		43.1	Ultimate Tensile Strength (KSI)		SCAN SER
Zn					2215 TEMPER T8511
II Ga		بي	Yield Strength Percent (KSI) Elongation		DATE OF SI SALESHAN FORE
<b>∠</b>		39.5	d Strength (KSI)		DATE OF SHIPMENT 10/22/2012 SALESIMAN FORBES DODWELL
iw	ı	13.60	Percent Elongation	I	н <i>риент</i> 10/22/2012 3ES DODW
Ľ	İ	30	ent	ı	
四		88.5	j=		EXTRUDEX ORDER NO.  151040 — 1  MADE IN CA  CERTIFICATION  MILL TEST ASTM E
뫋		-88.5,88.2,88.0-	Hardness		
S		8.0	ίζι		ORDEI
lã					R NO. IN CA
ß			Cond		UDEX ORDER NO. MAN 140 — 1 MADE IN CANADA MILL TEST ASTM B221-12
l≱			Conductivity		: −
Al Other					FEST NO. 276558
				_	

Cast Number 18526 6061

0.55

0.23 0.21

0.06

0.83 0.04

0.00 Z

0.01 0.01 1

0.00 Ga

0.00

0.00 ΙW

0.00 17

0.00 四

0.00 먕

0.00 S

0.00 ΙÑ

ပြ

≥

Other

0.00Remainder 0.00

David Natale

Quality Control Manager

1 - CUSTOMER COPY

MILL TEST REPORT

Doc No. 145047 Indexed 23Oct12 by slssup1

### Certificate of Mill Test Results

BL PEC 805103-003

Pg 1/2

ALUMINUM FLAT BAR 6061-T6511 .375" x 1.00" X 144.0000" PART NO.

PO/Rel 18936

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.

Signed by:	
------------	--



### CERTIFIED TEST REPORT

http://Online.KaiserAluminum.com

KAISER ALUMINUM FABRICATED PRODUCTS, LLC 5205 KAISER DRIVE

KALAMAZOO, N								
CUSTOMER PO NUMB	ER: CUSTO	MER PART NUMBER:	RT NUMBER: PRODUCT DESCRIPTION:					
PEC-241958-11	ALRE	ALREC00208 .375 >		X 1,000 SC RECT BAR				
KAISER ORDER NUMB	ER: LINE ITEM:	SHIP DATE:	KAISER LOT NUMBER	ALLOY:	TEMPER:			
627965	011	10/02/2012	Z00243003	6061	T6511			
WEIGHT SHIPPED:	QUANTITY:	B/L NUMBER:	DIAM/DAF/THKNS:	WIDTH:	LENGTH:			
1016.000 LB	192.000 PCS	604574			12.000 FT			
SHIP TO:			SOLD TO:					
THYSSENKRUF	P MATERIALS NA			 IYSSENKRUPP MATERIALS NA 21 LANGSTAFF ROAD				

2821 LANGSTAFF ROAD CONCORD, ON L4K 5C6 CANADA CONCORD, ON L4K 5C6 CANADA

### Actual Physical Properties

REFERENCE	DASH#	SAMPLE#	UTS (KSI)	YTS (KSI)	ELONG%	HARDNESS	CONDUCT.	BEND
Z0C243003 Z0C243003 Z0C243003 Z0C243003 Z0C243003	0001 0001 0001 0001 0001	1 2 3 4 5	44.7 46.2 44.6 44.6 44.9	41.0 42.5 40.9 41.0 41.2	17.8 17.0 13.3 18.2 17.2	RE 91 RE 91 RE 90 RE 92 RE 93	N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A
Z0C243003 Z0C243003	0001 0001	6	44.7 45.0	41.4	17.9 18.0	RE 92 RE 92	N/A	N/A

### Chemical Composition (wt%), Aluminum Remainder

LIMITS	Si	Fe	Cu	Mn	Mg	Cx	Zn	Ti	Pb	Bi	Zr	Ea	Tot	
Maximum Minimum 102012					1.20 0.80 .94		0.25 0.00 .02	0.15 0.00 .02	NA NA OO	AN AN 00.	AN AN 00.	C.05 C.00 .01		

Applicable Requirements:

ASIM-B221-12 STENCILED ASME-SB221 1998 SECT II AMS-QQ-A-2C0/8 (2007) UNS#A96061 (26511 also conforms to T6-nct applicable to other tempers)

Miscellaneous Notes

MANUFACTURED IN USA MELTED IN USA

DAS 13/01/30

Plant Serial: 00062347

Kaiser Order Number: 627965

Line Item: 011

### Certificate of Mill Test Results

BL PEC-805103-003

Pg 2/2

ALUMINUM FLAT BAR 6061-T6511 .375" x 1.00" X 144.0000" PART NO.

PO/Rel 18936

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.

Signed by:\_



FABRICATED PRODUCTS

KAISER ALUMINUM FABRICATED PRODUCTS, LLC 5205 KAISER DRIVE KALAMAZOO, MI 49048

### CERTIFIED TEST REPORT

http://Online.KaiserAluminum.com

### CERTIFICATION

Kaiser Aluminum Fabricated Products, LLC hereby certifies that metal shipped under this order has been inspected and tested and found in conformance with applicable specifications forming a part of the description set forth in Kaiser's sales acknowledgement form. Any warranty is limited to that shown on the conformation of t Kaiser's general terms and conditions of sale. Test reports are on file, subject to examination.

Calvin Latting, Quality & Technology Manager

Plant Serial: 00062347

Kaiser Order Number: 627965 Line Item: C11

Page 2 of 2

### Certificate of Mill Test Results

BL PEC 805103-004

28Jan13 Pg 1/1

PO/Rel 18936

ALUMINUM FLAT BAR 6061-T6511 .375" x 3.00" X 144.0000" PART NO.

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.

		٠
Signed by:	 	

### ALUMINUM EXTRUSION INC.

### Material Test Report

Manifest: 252270

Ship To: ThyssenKrupp Materials NA

2821 Langstaff Road

Concord, ON L4K 5C6

Ticket: 5280548

Our Order: 388867 + 5

Cust P.O.: 242137

Die: ES05677

Part: 05677-000-144

Alloy Temper: 6061 T6511

Description: .375 x 3.000

Print Date: 10/3/12

				Ch	emical	Comp	osition Ra	nge			
6061	<u>Si</u>	<u>Fe</u>	<u>Cu</u>	<u>Mn</u>	<u>M</u> g	<u>Cr</u>	<u>Zn</u>	<u>Ti</u>	Other Each	Other Total	
Min	0.40		0.15		0.8	0.04					
Max	0.8	0.7	0.40	0.15	1.2	0.35	0.25	0.15	0.05	0.15	

ION INC.					ical Proper trength ksi	ties		
EXTRUSION	Sample ID	Cast #	Lot#	<u>Test</u> <u>Date</u>	Ultimate Tensile	Yield 2% offset	Elongation 2" gage length	4
INUM	131939	12091081A	<b>A1</b> 1	10/2/12	46.14	42.37	9.9	

Applicable Specifications

ASTMB221-08 QQA200/8

Country of Origin:

85 Parkshore Drive, Brampton, Ontario CANADA L6T 5M1

Can Art Aluminum Extrusion Inc. certifies that materials shipped under this order have been inspected and tested in accordance with Aluminum Association and agreed upon customer specifications. Can Art assumes no liability for additional costs which may be incurred during the customer's manufacture and sale of its products, and is subject only to the replacement of any materials not within agreed upon specifications provided written notification is received by Can Art within 30 days from the date of shipment.

Ray Hussain - Tensile Testing

Authorized:

### DART AEROSPACE THYSSENKRUPP MATERIALS NA

ALUMINUM FLAT BAR 6061-T6511 .50" x 2.50" X 144.0000"

PO/Rel 18936

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.

Signed by:

Certificate of Mill Test Results BL PEC-805103-005

28Jan13 Pg 1/1

### SERVICE CENTER METALS 5850 Quality Way

Prince George, VA 23875

## CERTIFIED INSPECTION REPORT AND TEST RESULTS FOR EXTRUDED PRODUCTS

OUR ORDER MUMBER

ITEM

N

166119

BILL TO ThyssenKrupp Materials NA ThyssenKrupp Materials NA PEC Quantity Certified 1,200 lbs 68 pcs CUSTOMER PO CUSTOMER PART NUMBER MANUFEST NUMBER PEC-244747 RB0097 178618 DESCRIPTION SCRB .500x2.500 ALLOY! TEMPER DIE NUMBER 6061-T6511 RB0097 DATE OF SHIPMENT **David Schroeder** 1/11/2013 SPECIFICATION
AMS-QQA-200/8 ASTM-B221-12 StencilContinuous CERTIFICATION

We hereby certify that the material covered by this report has been inspected in accordance with the most recent certification revision, and has been found to meet the applicable requirements described herein, including any specifications forming a part of the description, and that samples representative of the material met the composition limits and had the mechanical properties shown. CCM extrusions are manufactured in the USA.

also meet the requirements of 6061-T6 Items produced and certified as 6061-T6511

мест	Tests	_	<b>.</b> -	^	Ç	4	Ċī	တ
Mechanical Properties	Lot No.	201222754	201222734	201222104	201222754	201222754	201222754	201222754
	36	/3	pι	1	3	1	S A 8°	OA 1.
lest Date		01/09/13	01/09/13	01/00/13		01/09/13	01/09/13	01/09/13
Ultimate Tensile Strength (KSI)		43.4	45.6	43.2	n n	4 4 4 4	10.1 2.0t	40.4
Yield Stren (KSI)		42.6	43.8	42.2	137	3 0	n	<del>t</del> .
qth								
gth Percent Elongation		12.9	14.7	12.1	15.8	ב ני	٠ ١	Ç

Chemical Composition for Alumi	position for	Alumin	ium All	inum Alloy 6061							!		
Cast Number	Alloy	চি	Fe	Cu	<u>M</u>	Mg	lζ	Zn	Ħ	<u>A</u> L	Others <u>Each</u> <u>I</u>	ers <u>Total</u>	Melt Source:
113025 C67R0330 C67R0331	6061 6061 6061	0.71 0.63 0.61	0.35 0.16 0.16	0.32 0.18 0.17	0.10 0.01 0.02	0.85 0.85 0.85	0.11 0.06 0.06	0.08 0.01 0.01	0.02 0.01 0.02	97.46 98.09 98.10	0.05 0.05 0.05	0.15 0.15 0.15	United States of America United States of America United States of America
								<u>C3</u>	a tu	<b>P</b> .			Print Date: 1/11/2013

Calvin J. Wingins Director of Quality & Technical Services

### **Certificate of Mill Test Results**

DART AEROSPACE

ALUMINUM SQUARE BAR 6061-T6511 .750" X 144.0000" PART NO. PO/Rel 18936

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.

	BL PEC-805103-006	28Jan13
l hv•		Pg 1/1

CAN ART

### Material Test Report

Manifest: 252539

Ship To: ThyssenKrupp Materials NA

2821 Langstaff Road

Concord, ON L4K 5C6

Ticket:

5280930

Our Order: 388937 - 5

Cust P.O.: 242246

Die: ES05504

<u>Fe</u>

0.7

Part: 05504-000-144

Alloy Temper: 6061 T6511

<u>Si</u>

0.40

8.0

6061

Min

Max

Description: .750 x .750

Print Date: 10/10/12

	Ch	emical	Compo	sition Ra	nge			
<u>Cu</u>	<u>Mn</u>	<u>Mg</u>	<u>Cr</u>	<u>Zn</u>	<u>Ti</u>	OtherEach	OtherTot	<u>al</u>
0.15		0.8	0.04					
0.40	0.15	1.2	0.35	0.25	0.15	0.05	0.15	

		Mechanical Strengt	1 -	3	
Sample C	ast# Lot#		timate ensile	Yield 2% offset	Elongation 2" gage length
131947 1209	90031A A11	10/2/12 4	.12	37.66	9.9

Applicable Specifications

ASTMB221-08 QQA200/8

Country of Origin: 85 Parkshore Drive,

85 Parkshore Drive, Brampton, Ontario CANADA L6T 5M1

14 13/01/30

Can Art Aluminum Extrusion Inc. certifies that materials shipped under this order have been inspected and tested in accordance with Aluminum Association and agreed upon customer specifications. Can Art assumes no liability for additional costs which may be incurred during the customer's manufacture and sale of its products, and is subject only to the replacement of any materials not within agreed upon specifications provided written notification is received by Can Art within 30 days from the date of shipment.

Ray Hussain - Tensile Testing

Authorized:

Evan Eng. Quality Assurance Mgr.

DART AEROSPACE ALUMINUM FLAT BAR 6061-T6511 .750"\_x 4.00" X 144.0000"

PO/Rel 18936

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.

**Certificate of Mill Test Results** 

BL PEC-805103-007

28Jan13 Pg 1/1



### SERVICE CENTER METALS 5850 Quality Way

## CERTIFIED INSPECTION REPORT AND TEST RESULTS FOR EXTRUDED PRODUCTS

SCM extrusions are manufactured in the USA. description, and that samples representative of the material met the composition limits and had the mechanical properties shown. revision, and has been found to meet the applicable requirements described herein, including any specifications forming a part of the We hereby certify that the material covered by this report has been inspected in accordance with the most recent certification BILL TO ThyssenKrupp Materials NA PEC ThyssenKrupp Materials NA Quantity Certified 1,270 lbs Prince George, VA 23875 30 pcs MANIFEST NUMBER CUSTOMER PART NUMBER CUSTOMER PO PEC-244036 RB0119 OE NUMBER DESCRIPTION SCRB .750x4.000 ALLOY/TEMPER 6061-T6511 RB0119 SALESPERSON DATE OF SHIPMENT David Schroeder 12/7/2012 DUR DROER NUMBER Items produced and certified as 6061-T6511 also meet the requirements of 6061-T6 AMS-QQA-200/8 ASTM-B221-12 StencilContinuous SPECIFICATION CERTIFICATION 163798 N

Wechanical Tests I o				
mechanical Properties	201221010			
erues				-
1				And the state of t
lest Date	12/03/12	30	S	A 12 2-8
i do	3/12		<i>(0</i> (	5
Ultimate Tensile Strength (KSI)	47.1			E des contractos comitatos de autores entractos de comitatos como de comitatos de c
Yield Strength (KSI)	44.0			State Committee of Basic Committee of Commit
Percent Elongation	15.7			to the contrate of the order of the contrate o

Print Date: 12/7/2012	,	•			$\sim$			;						
United States of America	0.05 0.15	0.05	97.48	0.02	0.01 0.02	0.09	0.88	0.10	0.39 0.31 0.10		0.72	6061	C29J1069	I
Melt Source:	<u>Idal</u>	Each I	<b>₽</b>	H	<u>2n</u>	ΙQ	Mg	Mn	[C	6	lᾶ	Alloy	Cast Number	
	<b>,</b>	Ç.							оу 606	um Al	r Alumir	position fo	Chemical Composition for Aluminum Alloy 6061	

Calvin J. Wiggins, Director of Quality & Technical Services

Rev 9/23/11 - UMS

### DART AEROSPACE THYSSENKRUPP MATERIALS NA

ALUMINUM FLAT BAR 6061-T6511 125" x .750" X 240.0000"

PO/Rel 18936

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.

Signed by:

Certificate of Mill Test Results BL PEC-805103-008

28Jan13 Pg 1/1



411 CHRISLEA ROAD, WOODBRIDGE, ONTARIO, CANADA L4L 8N4 TEL: (416)745-4444 FAX:(416)745-0925 1-800-668-7210

## A: UMINUM

MILL TEST REPORT

BALL 70

THYSSENKRUPP MATERIALS, NA THYSSENKRUPP MATERIALS, NA

Mechanical Properties

0

Alloy

Test Date

Ultimate Tensile Strength (KSI)

Yield Strength

(KSI)

Elongation

Percent

Hardness

Conductivity

.125"x.750" FB

.. Cen Code: CUSTOMER PO

CUSTOMER PART NUMBER PEC-243994 0.64 AULLOY တ

DIE NUMBER 4642

PART DESCRIPTION 6061 T6511

1-125-750

**TEMPER** 

DATE OF SHIPMENT

SALESMAN

12/6/2012

FORBES DODWELL

EXTRUDEX ORDER NO.

MANIFEST NO

279554

http://www.extrudex.com

152624 — MADE IN CANADA

CERTIFICATION

MILL TEST ASTM B221-12

**Chemical Composition** 

A 11

6061

Dec/03/12

41.9

37.2

12.20

87.1, 86.8, 87.0



0.55 Ñ 0.16 0.20 Fe 5 0.01 S 0.80 0.08 lΩ 0.00 Z 0.01 Ŋ 0.01 0.00 Ga 0.00 1 0.00 lœ 0.00 14 0.00 <u>(D</u> 0.00 몽 0.00 S 0.00 Ŕ 0.00Remainder 0.00 ß

≥

Quality Control Manager David Natale

13/01/30

1 - CUSTOMER COPY

Doc No. 148551

Indexed 10Dec12 by slssup1

MILL TEST REPORT

### DART AEROSPACE THYSSENKRUPP MATERIALS NA

ALUMINUM FLAT BAR 6061-T6511 1.00" x 2.00" X 144.0000" ART NO

PO/Rel 18936

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.

Signed by:

BL PEC-805103-009

Certificate of Mill Test Results

Pg 1/1 28Jan13



BILL TO

### SERVICE CENTER METALS

Prince George, VA 23875 5850 Quality Way

## CERTIFIED INSPECTION REPORT AND TEST RESULTS FOR EXTRUDED PRODUCTS

OUR ORDER NUMBER

TEM.

27

ThyssenKrupp Materials NA ThyssenKrupp Materials NA PEC Quantity Certified 1,542 lbs 54 pcs CUSTOMER PO MANIFEST NUMBER CUSTOMER PART NUMBER PEC-244211 176543 SCRB 1.000x2.000 DESCRIPTION ALLOY / TEMPER DIE NUMBER 6061-T6511 RB0124 SALESPERSON DATE OF SHIPMENT David Schroeder 12/13/2012 SPECIFICATION AMS-QQA-200/8 ASTM-B221-12 StencilContinuous CERTIFICATION 164440

revision, and has been found to meet the applicable requirements described herein, including any specifications forming a part of the description, and that samples representative of the material met the composition limits and had the mechanical properties shown. We hereby certify that the material covered by this report has been inspected in accordance with the most recent certification factured in the USA

Items produced and certified as 6061-T6511

also meet the requirements of 6061-T6

100 2		98 2 99 2	97 2	96 2	95 2	94 2	93 2	92 2	91 2	Tests	Mechani	SCM extrusion
201221186	201221186	201221186 201221186	201221186	201221186	201221186	201221186	201221186	201221186	201221186	LOI NO.	mecnanical Properties	SCM extrusions are manufactured in the COA.
12/05/12	12/05/12		3/ 12/05/12						12/05/12	ACIONAL MARIANTANA MAR	lest Date	
48.9	48.9	48.4	0.65	\$ 60.00	40.4	40.9	100 ±	40 .0	47.6	400	Strength (KSI)	
45.5	45.3 45.4	45.1	44.0	4 C.C	A 4	45.4	45.3	45.1	44.9	45.8	(KSI)	Vield Strength
15.0	13.9	14.7	16.7	150	, (i)	13.9	<u>1</u> 5	147	16.7	15.0	Elongation	Percent

**Chemical Composition for Aluminum Alloy 6061** 

Doc No. 149258 Indexed 19Dec12 by slssup1

1112157 1112148

> 6061 6061

0.74 0.75

0.34 0.35

0.32 0.31

0.10

0.87 0.87

0.09

0.07 0.07

0.02 0.03

97.43 97,44

0.05

0.15 0.15

> United States of America United States of America

0.05

Cast Number

Alloy

S

Fe

Б

S

S

ĮΩ

N

1

Each

Melt Source:

Others Total

Calvin J. Wiggins, Director of Quality & Technical Services

Rev. 9/23/11 - UMS

Print Date: 12/13/2012

# THYSSENKRUPP MATERIALS NA DART AEROSPACE ALUMINUM FLAT BAR 6061, T6511 1.00" x 2.50" X 144,0000" PART NO.

PO/Rel 18936

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.

Signed by:

BL PEC-805103-010

**Certificate of Mill Test Results** 

28Jan13 Pg 1/1

## MINIMU-A III

411 CHRISLEA ROAD, WOODBRIDGE, ONTARIO, CANADA L4L 8N4 TEL: (416)745-4444 FAX:(416)745-0925 1-800-668-7210 http://www.extrudex.com

3	A.11	<b>Chemical Composition</b>	A.11	Lot	<b>Mechanical Properties</b>	MILL TEST REPORT  BILL TO  THYSSENKRUPP MATERIALS,NA SMP TO  THYSSENKRUPP MATERIALS,NA SO DESCRIPTION 1"X2.5" FB
	<u>Cast Number</u> 2BS870 6061	position	6061	Alloy	operties	REPORT  MATERIALS,NA  MATERIALS,NA
	<u>Si</u>					
	<u>Si</u> <u>Fe</u> 0.59 0.16					Cert Code:  1  CUSTOMER PO  CUSTOMER PA  1-1
	0.21					MER PO PEC 1-10
	<u>Mn</u> 0.03		Z	l <del>,</del>		Cert Gode:  1  CUSTOMER PO PEC-243029  CUSTOMER PART NUMBER 1-1000-2500
	Mg 0.89	I	Nov/14/12	Test Date		0.74 0.74 90
	<u>Cr</u> 0.07		[2			DIE HUMBER S ALLOY 6061
	Mg Cr Ni Zn 0.89 0.07 0.00 0.01		43.0	Ultimate Tensile Strength (KSI)		
	Zn 0	ļ		ensile (KSI)		4655 TEMPER T6511
	Ti <u>Ga</u> 0.02 <b>0</b> .00		ω	Yield Strength (KSI)		DATE OF SH 1 SALESIMAN FORB
			39.3	d Strengt (KSI)		E 11 Mar
	<u>1</u> B 00 0.0		<u> </u>	n Percent Elongation		HIPMENT 11/19/2012 BES DODWELL
	0.00 OC		13.50	Percent Elongation		ÆLL
	0.00 Bi	Ì	91			EXTRUDE 151534 CERTIFICATION MILL
	) 0.00		91.0,90.8,91.3	Hardness		S34  Airow  MILL
	<u>sn</u>	l	91.3	S		EXTRUDEX ORDER NO.  151534 — 6  MADE IN C.  MILL TEST ASTM
	0.00 Sr					R NO.
	0.00R			Con		UDEX ORDER NO. MAN 534 — 6 MADE IN CANADA MILL TEST ASTM B221-12
	Y         B         Zr         Bi         Pb         Sn         Sr         Co         Al         Other           0.00 <td< td=""><td></td><td></td><td>Conductivity</td><td></td><td>MANIFEST NO.  278491  4DA  1-12</td></td<>			Conductivity		MANIFEST NO.  278491  4DA  1-12

David Natale

Quality Control Manager

1 - CUSTOMER COPY

Doc No. 147274 Indexed 21Nov12 by sissup1

MILL TEST REPORT

ALUMINUM FLT BAR ECONOPLT 6061-T6511 1.00" X 12.00" X 144.5000"

PO/Rel 18936

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.

Signed by:

Certificate of Mill Test Results

BL PEC-805103-011

28Jan13 Pg 1/1



### SERVICE CENTER METALS

5850 Quality Way

## CERTIFIED INSPECTION REPORT AND TEST RESULTS FOR EXTRUDED PRODUCTS

BR.1 70 ThyssenKrupp Materials NA PEC ThyssenKrupp Materials NA Quantity Certified 2,032 lbs Prince George, VA 23875 12pcs CUSTOMER PO MANIFEST NUMBER CUSTOMER PART NUMBER PEC-244313 176547 PL0741 PL 1.000 x 12.000 DESCRIPTION DIE NUMBER ALLOY / TEMPER 6061-T6511E PL0741 SALESPERSON DATE OF SHIPMENT David Schroeder 12/13/2012 CERTIFICATION OUR ORDER NUMBER SPECIFICATION AMS-QQA-200/8 ASTM-B221-12 StencilContinuous 164614 w

description, and that samples representative of the material met the composition limits and had the mechanical properties shown. SCM extrusions are manufactured in the USA revision, and has been found to meet the applicable requirements described herein, including any specifications forming a part of the We hereby certify that the material covered by this report has been inspected in accordance with the most recent certification

			N	Tests Lot No.	SCM extrusions are m
			:::::::::::::::::::::::::::::::::::::::	pernes	SCM extrusions are manufactured in the OSA.
OAS 14 9-89	13/01/	3 <i>0</i>	12/10/12		est Date
			50.1	Strength (KSI)	Ultimate Tensile
			46.7	(KSI)	Yield Strength
			14.7	Elongation	Percent

ices Rov. 9/23/11 - UMS	Quality & Technical Services	lity & Tech	ctor of Qua	gins, Dire	J. Wiggi	Calvin								
Print Date: 12/13/2012			) } }	0 1	$\cap$									
United States of America United States of America	0.15 0.15	0.05 0.05	97.37 97.43	0.02 0.02	0.05 0.07	0.11 0.10	0.90 0.87	0.11 0.10	0.31	0.37 0.34	0.76 0.75	6061 6061	1112080 1112157	
Melt Source:	Total	Each	<b>P</b>	Ħ	Zn	lδ	Mg	Mn	ပြ	Fe	<u> δ</u>	Alloy	Cast Number	
·		Shedic							oy 606	um Ali	r Alumir	nposition fo	Chemical Composition for Aluminum Alloy 6061	

ALUMINUM PLATE 6061-T651 1.00" THICK X 15.0000" X 144.5000"

PO/Rel 18936

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.

Signed by:

Certificate of Mill Test Results

BL PEC-805103-012

28Jan13 Pg 1/1

6

### TEST CERTIFICATE

.

:. :

:: "

hulam'n, Lim'iaci Reg. No. 1960/11322476 WY Reg. No. 4850143604 HEAD DEPICE: Moses Mabbilda Ad, Placeira ailtaburg 3201, P. O., bar, 74. Petammattaburg 4300, Sudri Africa Iciophone: AZ 32 345 4511 - Jelfan: IZ7 33 374 6345 TCL PXIZ

### Certificate No: 1210LB5989

09/10/02600	docu		:	Lot No.		MECHANICAL TEST RESULTS	Case No : PFY901,PFY900,PFY902			City	CONCORD	HYSGENOXOTT MAS EXPENSES	BUYER
VBHF			:	Cast No.	į	TEST RESUL	אמן, ספרישם, ויספרי						DO MATERIAL
29406039				Wetal Id		.a	FY9C2					5	AN AN
9081				Alloy									
N -	Max	ş		Spec No	. •			item Part :	Ĕ	Cust	Release No	Į	Shipping
40.0	3	35.1	(Kal)	Handang PielA		] .		art:	HULAMIN Order No: 225052E	Cust Order No :	PALIST NO:		Shipping FileNo:
46.0	100	42.0	(Ke)	ยาน				ź	No: 2250		RE19745B	324	-
ថ	<b>*</b>	φ	(%)	Elongation A50	Mech				52E	PEC-242085	7458	SM (ROERS	UR45408 09/10/026C0
			35	Earing	Mechanical Properties			Combi	Cust R	Cardifi	Allay -	Dimension:	Produ
03/10/12	03/10/12			Earing YestDabs	operties			Combined Pillst No : R124595	Cust ReuPart No:	Cartificate No:	Alloy - Temper:	sion :	et; PLATET
2 1	u l		(Inches)	Gauge				o : R124595		1210LB5989	6051 - 1651	7.×4.	EAT. TRE
-				Bend Tost						28698	T651	1"X48.5"X144.5"	ATED LINISH
1.022	1,033	} -	(Inches)	Actual					•				ED., 6061-16
1	3/	le	1/	1 31	9	-							Froduct : PLATE HEAT. TREATED LINISHED., 8081-1851 1" x 40.5" x 144.5"

COMPORMS TO: ASME SE-206 ASTRI #201/10 AMS 4027N AMS-CICA-25041, 08.1997

CHEMICAL COMPOSITION

Cast No.

<u>A</u>lloy

SI(%) Fe(%) Cu(%) Mn(%) Mg(%) Cn(%)

S S

VBHF 0031 0.70 0.42 0.50

0.15 1.2 0.11 1.04

0.35 0.20

0.25 0.15 0.06 0.011

D.05

97.13

Zn (%) Ti (%) Each(%) Tofal(%)

AI(%)

0AS 14 9-89

For purposes of determining conformance with these specifications, an observed value or a calculated value shall be rounded to the natest unit in the last right-hand digit used in expressing the specification first, is exceeding a with the rounding method of ASTM Fractics EZB, for Using Significant Digits to Test Data to Determine Conformance with Specifications.

we hereby certify, that the materal described above has been tested and complies with the terms of the order contract. The inspection results indicated in the chemical composition have been obtained from cast analysis.

Dr. A. PROMOTON EAD OF CHEMICAL TESTING)

V. MANITURE OF PHYSICAL TESTINGS Camp.

# THYSSENKRUPP MATERIALS NA DART AEROSPACE Wes ALLUMINUM SQUARE BAR 6061-T6511 1.250" X 144.0000"

PO/Rel 18936

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.

Signed by:

Certificate of Mill Test Results BL PEC-805103-013

28Jan13 Pg 1/1

## **■ A\_UMINUM**

411 CHRISLEA ROAD, WOODBRIDGE, ONTARIO, CANADA L4L 8N4 TEL: (416)745-4444 FAX:(416)745-0925 1-800-668-7210 http://www.extrudex.com

CERTIFICATION		PART DESCRIPTION	CUSTOMER PART NUMBER 3-1250	50 DESCRIPTION 1.25" SQ
DWELL MADE IN CANADA	11 FORBES DODWELL	6061 T6511	-242176	
12 150508 — 7	10/2/2012	S 4763	1 0.87	SSENKRUPP MATERIALS,NA
EXTRUDEX ORDER NO. MANIFEST NO.	DATE OF SHIPMENT	DIE NUMBER	Cert Code:	BILL TO

	A.11		Chemical
	2BR922 6	Cast Number	Composition
<b>"</b>	6061		
	0.57	ιΣί	
	7 0.17	Fe	
	7 0.21	l C	
	1 0.01	M	
	1 0.87	M	
	7 0.07	ĮΩ	
	0.00	<u>Z</u>	
		Zn	
	0.01 0.02	H	
		Ga	
	0.00 0.00	<b>K</b>	
		100	
	0.00	<u>B</u> <u>Zr</u> <u>Bi</u> <u>Pb</u>	
	0.00	四	
	0.00	뜅	
	0.00	Si	
	0.00	S.	
	0.00	6	
	₹emainα	≱	
	ter 0.00	Sn. Sr. Co. Al Other	

6061

Oct/02/12

43.2

38.9

14.80

91.9,92.3,91.2

Ö

Alloy

Test Date

Ultimate Tensile Yield Strength
Strength (KSI) (KSI)

Percent Elongation

Hardness

Conductivity

DAS 13/0//30

Quality Control Manager

David Natale

1 - CUSTOMER COPY

MILL TEST REPORT

**Certificate of Mill Test Results** 

DART AEROSPACE

ALUMINUM FLAT BAR 6061-T6511 1.250" x 1.50" X 144.0000" PART NO. PO/Rel 18936

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs. BL PEC-805103-014

28Jan13

Signed by:\_\_\_\_\_\_ Pg 1/2

### KAISER ALUMINUM FABRICATED PRODUCTS

THOM:

CERTIFIED TEST REPORT

http://Online.KaiserAluminum.com

KAISER ALUMINUM FABRICATED PRODUCTS, LLC 5205 KAISER DRIVE KALAMAZOO, MI 49048

CUSTOMER FO NUMBER	t:	CUSTOMER	PART NUMBER:	PRO	DUCT DESCRIPTION	N:•	
PEC-244210-3		ALREC0	0007	1.29	50 X 1.500 SC	RECT BAR	
KAISER ORDER NUMBER	R: LINE ITEM:		SHIP DATE:	KAIS	ER LOT NUMBER:	ALLOY:	TEMPER:
633256	003		12/07/2012	zoc	261029	6061	T6511
WEIGHT SHIPPED:	QUANTITY:		B/L NUMBER:	DIAN	VDAF/THKNS:	WIDTH: '	LENGTH:
952.000 LB	36,000 PC	CS	605071	•		·	12.000 FT
SHIP TO:				SOL	р то:		
THYSSENKRUPP 2821 LANGSTAFF CONCORD, ON L	ROAD			282	1 LANGSTAF	MATERIALS NA ROAD 4K 5C6 CANADA	

### Actual Physical Properties

REFERENCE	DASH#	SAMPI	E#	UTS (KSI)	YTS (KSI)	ELONG%	HARI	DNESS	CONDUCT.	BEND
Z0C261029	0001		1	48.7	46.1	17.3	RE	93	N/A	· κ/A
Z3C261029	0001		2	46.2	43.1	14.2	RE.	92	N/A	N/A
zoc261029	0001		3	47.8	45.C	13.4	RE	92	N/A	N/A
. 700261029	CC01		4 !	16.5	43.5	16.9	RE	91	N/A	N/A
200261029	CC01		5	46.9	43.8	16.4	RE	90	N/A	N/A

### Chemical Composition (wt%) Aluminum Remainder

LIMITS	Si	Fe	Cu	Mn	Mg	Cr	Zņ	Ti	Pb	Bi	Zr	Ea	Tot
Maximum	0.3Ç	0.70	0.40 0	. 15	1.2C	0.35	0.25	0.15	NA	NA	NΑ	0.05	0.15
Minimum	0.40	0.00	0.15 0	.DC	0.30	0.04	0.00	0.00	NA	NA	NA	0.00	0.00
102122	.70	.28	. 24	. D9	.91	.09	.02	.03	.00	.00	.00	.01	.03

### Applicable Requirements:

ASTM-B221-12 STENCILED ASME-SB221 1998 SECT II AMS-QQ-A-200/8 (2007) UNS#A96061 (T6511 also conforms to T6-not applicable to other tempers)

### Miscellaneous Notes

MANUFACTURED IN USA MELTED IN USA

DAS 13/0/30

Plant Scrial: 00069563 Kaiser Order Number: 633256

Line Item: 003

Page 1 of 2

### Certificate of Mill Test Results

ALUMINUM FLAT BAR 6061-T6511 1.250" x 1.50" X 144.0000" PART NO.

PO/Rel 18936

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.

BL PEC-	802102-01 <del>4</del>	200 0111
Signed by:		Pg 2/2



KAISER ALUMINUM FABRICATED PRODUCTS, LLC 5205 KAISER DRIVE KALAMAZOO, MI 49048

### CERTIFIED TEST REPORT

http://Online.KaiserAluminum.com

### CERTIFICATION

Kaiser Aluminum Fabricated Products, LLC heroby certifies that metal shipped under this order has been inspected and tested and found in conformance with applicable specifications forming a part of the description set forth in Kaiser's sales acknowledgement form. Any warranty is limited to that shown on Kaiser's general terms and conditions of sale. Test reports are on file, subject to examination.

Calvin Latting, Quality & Technology Manager

Plant Serial: 00069563 Kaiser Order Number: 633256

Line Item: 003

Page 2 ot 2

### DART AEROSPACE THYSSENKRUPP MATERIALS NA

ALUMINUM SQUARE BAR 6061-T6511 2.00" X 144.0000"

PO/Rel 18936

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.

Signed by:

**Certificate of Mill Test Results** BL PEC-805103-015

28Jan13 Pg 1/1

### SERVICE CENTER METALS Prince George, VA 23875 5850 Quality Way

## **CERTIFIED INSPECTION REPORT AND TEST RESULTS** FOR EXTRUDED PRODUCTS

Quantity Certified 3,084 lbs	SHIP TO ThyssenKrupp Materials NA PEC	ยเน 70 ThyssenKrupp Materials NA	
54 pcs SQ0044	customer Po PEC-243903	MANIFEST NUMBER 175459	Filling Google, VD Accide
SCSB 2.000	ALLOY/TEMPER 6061-T6511	DIE NUMBER SQ0044	
	salesperson  David Schroeder	1ENT -	
	SPECIFICATION AMIS-QQA-200/8	ASTM-B221-12 StencilContinuous	оия оквек мимвея 163679
		cilContinuous	пем 6

revision, and has been found to meet the applicable requirements described herein, including any specifications forming a part of the description, and that samples representative of the material met the composition limits and had the mechanical properties shown. SCM extrusions are manufactured in the USA. We hereby certify that the material covered by this report has been inspected in accordance with the most recent certification

Items produced and certified as 6061-T6511 also meet the requirements of 6061-T6

		95	94	93	92	91 <sup>:</sup>	Tests	wecna
		201219894	201219894	201219894	201219894	201219894	Lot No.	vecnanical Properties
			٠					
A5 14 2-8	13/1	b <i>l</i>	[3	\$6				
		11/21/12	11/20/12	11/20/12	11/16/12	11/16/12		Test Date
	:	48.1	50.4	49.5	50.7	50.0		Ultimate Tensile
		44.2	46.9	45.8	47.1	46.8		Yield Strength
		14.9	13.2	12.2	16.9	11.5		Percent Elongation

	Chemical
	Chemical Composition for Aluminum Alloy 6067
I	Tor.
	Aluminum
	Alloy
	6061

					l									
United States of America	0.15	0.05	97.50	0.03	0.04	0.10	0.85	0.09	0.31	0.37	0.71	6061	1112006	
Melt Source:	Total	Others Each T	<u>A</u> L	H	Zn	lΩ	Mg	Mn	<u>C</u>	Fe	<u> Si</u>	Alloy	Cast Number	
													Cilcumpation of the second of	

Calvin J. Wingins Director of Quality & Technical Service

Print Date: 11/30/2012

ALUMINUM FLAT BAR 6061-T6511 2.00" X 8.00" X 144.0000" ART NO.

PO/Rel 18936

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.

Signed by:

BL PEC-805103-016

Certificate of Mill Test Results 28Jan13 Pg 1/1



### SERVICE CENTER METALS

5850 Quality Way

## CERTIFIED INSPECTION REPORT AND TEST RESULTS FOR EXTRUDED PRODUCTS

BILL TO ThyssenKrupp Materials NA ThyssenKrupp Materials NA PEC Quantity Certified 1,129 lbs Prince George, VA 23875 5pcs CUSTOMER PART NUMBER MANUFEST NUMBER CUSTOMER PO PEC-242175 PL0745 170434 DESCRIPTION DIE NUMBER PL 2.000x8.000 ALLOY! TEMPER 6061-T6511 PL0745 SALESPERSON DATE OF SHIPMENT David Schroeder 9/27/2012 CERTIFICATION OUR ORDER NUMBER SPECIFICATION AMS-QQA-200/8 ASTM-B221-12 StencilContinuous 159338

We hereby certify that the material covered by this report has been inspected in accordance with the most recent certification revision, and has been found to meet the applicable requirements described herein, including any specifications forming a part of the description, and that samples representative of the material met the composition limits and had the mechanical properties shown. SCM extrusions are manufactured in the USA.

Items produced and certified as 6061-T6511 also meet the requirements of 6061-T6

	+ 1		
			_r⊒t σ
		91 92	Mecna Mecna
			nan
		2012 2012 2012	ica
	:	201201586	Ical Prop
		88	Megnanical Properties  Tests  Lot No.
	:		Tue S
			Ĭ.
		!	
	,		
		i !	
		:	
			es
		01/31/12 01/31/12	est Date
		1/12	কি
DAS	12/ml	•	
14	13/01/	3 <i>0</i>	Ultima Stren
		48 8 47.9	oth K
			SILE
			:
			ield
		45.5 44.7	ield Strength (KSI)
	:		ngt
			ın
	: '	2.7	
		14.0 15.0	<u>Percent</u> Elongation
	e de la companya de		
			13 '-

	110312 112714	Cast Number Alloy Si Fe	
	6061 6061	Alloy	
	0.76 0.77	<u> S</u>	
Ì	0.35 0.36	Fe	
	0.32 0.34	(C	
	0.12 0.11	Mn	
	0.91 0.88	Mg	
	0.18 0.15	lζ	
7	0.05 0.05	Zn	
n 1 1	0.02 0.02	Ħ	
· ·	97.29 97.32	<u>AL</u>	
	0.05 0.05	Others <u>Each</u> I	
	0.15 0.15	ers <u>Total</u>	
Print Date: 9/27/2012	United States of America United States of America	Melt Source:	

### DART AEROSPACE THYSSENKRUPP MATERIALS NA

ALUMINUM FLAT BAR 6061-T6511 1.50" x 2.50" X 144.0000"

PO/Rel 18936
We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.

**Certificate of Mill Test Results** 

Signed by:

BL PEC-805103-017

28Jan13 Pg 1/1

### EXTRUDEX MONIMOTA ---

MILL TEST REPORT

411 CHRISLEA ROAD, WOODBRIDGE, ONTARIO, CANADA L4L 8N4 TEL: (416)745-4444 FAX:(416)745-0925 1-800-668-7210

http://www.extrudex.com

						Osition	Chemical Composition
	87.5,88.0,87.8	15.70	38.2	42.1	Oct/01/12	6061	A.11
Conductivity	Hardness	Percent Elongation	Yield Strength (KSI)	Ultimate Tensile Strength (KSI)	Test Date	Alloy	lo O
						perties	<b>Mechanical Properties</b>
275290 275290 3.ANADA	150402 — 3  MADE IN CANADA  CERTIFICATION  MILL TEST ASTM B221-12	DODWELL	DATE OF SHIPMENT 10/2/2012 SALESMAN 1 FORBES DODN	DIE NUMBER DATE OF SHIPMEN S 4660 10/2 ALLOY TEMPER SALESMAN 6061 T6511 FORBES PART DESCRIPTION	Cent Code: D  1 0.56  customer po PEC-242106 customer paat number P 1-1500-2500	AATERIALS,NA AATERIALS,NA	BILL TO THYSSENKRUPP MATERIALS,NA SHIP TO THYSSENKRUPP MATERIALS,NA SO DESCRIPTION 1.5"X2.5" FB

A.11 2BR823 6061

Cast Number

0.60 10

0.19 0.21 Fe

0.0 **2** S

0.87 M

0.07 ļΩ

0,00

0.01 0.01 Zn

0.0 00 Ge

90 1<

99 lω

0,00 17

0.00 四

9,0 B

9.00 S

0.00 R

ပ္ပ

|≥

Other

0.00Remainder 0.02

Z

5

David Natale

**Quality Control Manager** 

AS 14 1

13/0//36



Dart Aerospace Ltd. 1270 Aberdeen Street Hawkesbury, ON K6A 1K7

Tel: 613 632 9577 Fax: 613 632 1053

### **PURCHASE ORDER**

### Purchase Order ID PO18936

Purchase Order Date 1/24/13 **PO Print Date** 1/24/13

Page Number 1 of 4

VC-COP001 Order From: THYSSENKRUPP MATERIALS CA LTD O/A VPK METAL- C/O T27540/PO BOX 427. POSTAL"A" TORONTO, ON M5W 5V8 CA Chantal Lavoie Buyer Contact Name 905 669 9444 Requisition Nbr Vendor Phone Tax Resale Nbr 10127-2607 Vendor Fax 905 738 9033 Net 30 Terms Vendor Account Nbr Currency CAD FOB Destination-Collect Ship To: DART AEROSPACE LTD 1270 ABERDEEN HAWKE BURY, ON K6A 1K7 CANALA **Unit Price** Extended Ship Method Req Date/ Req Qty/ Description/ Line Nbr Reference Price Taxable Unit of Measure Mfg ID Revision ID Vendor Part Number \$30.00 \$1.5000 1/30/13 20.00 Yours ppd 6061-T6 Bar 0.25 x 3 54 M6061T6B0.250X02.500 Yes Special Inni: MATERIAL: 6061-T6/T651/T6510/6511/T62 ALUMINUM BAR AS PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117/4128/4115/4116 OR QQ-A-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B211 OR ASTM B221 \$2.3333 \$28.00 12.00 Yours ppd 1/30/13 M6061T6B0.250X04.000 6061-T6 Bar .250 x 4.00 Yes Special SAME AS ABOVE \$10.00 \$0.8333 M6061T6B0.375X01.000 6061T6 BAR .375 x + 172 1/30/13 12.00 Yours ppd 3

> SAME AS ABOVE Speci inst:

No substitution or deviation without consent. Certificate of Conformity or Material Certification required YES NO

Change Nbr:

hange Date: 1/24/13

Yes



Dart Aerospace Ltd. 1270 Aberdeen Street Hawkesbury, ON K6A 1K7

Tel: 613 632 9577 Fax: 613 632 1053

### PURCHASE ORDER

### Purchase Order ID PO18936

Purchase Order Date 1/24/13
PO Print Date 1/24/13

Page Number 2 of 4

					Pag	e Number 2 of 4	
T O T	er From: HYSSENKRUPP MATERIAL /A VPK METAL- C/O T2754 ORONTO, ON M5W 5V8 A	LS CA LTD 0/PO BOX 4275,PO					
Ve Ve	entact Name endor Phone 905 669 944 endor Fax 905 738 903 endor Account Nbr	1 4	Tax Terr	uisition Nbr Resale Nbr ns rency	Chantal Lavoie  10127-2607  Net 30  CAD  Destination-Collect	t	
4	M6061T6B0.375X03.000	6061T6 BAR .375 X 3	.00 1/30/13 Yes	12.00 f	Yours ppd	\$2.6667	\$32.00
5	M6061T6B0.500X02.500	Special In 6061-T6 Bar .500 x 2.		VE /12.00 f	Yours ppd	\$3.0000	\$36.00
6	M6061T6B0.750X00.750	Special   11 6061-T6 Bar .750 x .7		VE /12.00	• • • •	\$1.3333	\$16.00
7	M6061T6B0.750X04.000	Special II	nst: SAME AS ABO 1/30/13 Yes	DVE 12.00		\$7.1667	\$86.00
8	M6061T6B00750X00.125	Special (1) 6061-T6 Bar .750 x (1)		100.00	Yours ppd	\$0.3550	\$35.50
9	M6061T6B1.000X02.000	Special 1 6061-T6 Bar 1.00 x 2		36.00	O Yours ppd f	\$4.8500	\$174.60
					8	P13-Q-	30_
			4		consent. Certifica	titution or deviation ate of Conformity or ation required YES	Material
6	Change Nbr:		hange Date: 1/24/	13			



Dart Aerospace Ltd. 1270 Aberdeen Street Hawkesbury, ON K6A 1K7

Tel: 613 632 9577 Fax: 613 632 1053

### PURCHASE ORDER

### Purchase Order ID PO18936

Purchase Order Date 1/24/13
PO Print Date 1/24/13

Page Number 3 of 4

						Pag	ge Number 3 of 4	
TH O/A	r From: YSSENKRUPP MATERIA A VPK METAL- C/O T275 PRONTO, ON M5W 5V8			-COP001 LL"A"				
Con Vene Vene	tact Name dor Phone 905 669 94 dor Fax 905 738 90 dor Account Nbr			Buyer Requisitio Tax Resa Terms Currency FOB	on Nbr le Nbr	Chantal Lavoie  10127-2607  Net 30  CAD  Destination-Collec	t	
0	M6061T6B1.000X02.500	<b>Sp</b> c 6061-T6 Bar 1.	ecial Inst:	SAME AS ABOVE 1/30/13 Yes	12.00 f	Yours ppd	\$5.8333	\$70.00
1	M6061T6B1.000X12.000	Sp 6061-T6 Bar 1.	ecial Inst:	SAME AS ABOVE 1/30/13 Yes	2.50 f	Yours ppd	\$28.2353	\$352.94
2	M6061T6B1.000X15.000	Sp 6061-T6 Bar 1	ecial I qst*	SAME AS ABOVE 1/30/13 Yes	12.50 f		\$47.7400	\$596.75
3	M6061T6B1.250X01.250	Sp 6061-T6 Bar 1	pecial Unsti-	SAME AS ABOVE 1/30/13 Yes	48.00 f		\$3.6670	\$176.02
4	M6061T6B2.000X02.000	<b>SI</b> 6061-T6 Bar 2	oecial Inst: .00 x 2.00	SAME AS ABOVE 1/30/13 Yes	36.00 f	Yours ppd	\$9.3889	\$338.00
5	M6061T6B1.500X01.250	<b>S</b> 1 6061-T6 Bar 1	pecial Inst:	SAME AS ABOVE 1/30/13 Yes	36.00		\$4.5500	\$163.80 36.
Cha	ange Nbr:		Chan	ge Date: 1/24/13		consent. Certifica	itution or deviation te of Conformity of tion required YES	Material



Change Nbr:

Dart Aerospace Ltd. 1270 Aberdeen Street Hawkesbury, ON K6A 1K7

Tel: 613 632 9577 Fax: 613 632 1053

### PURCHASE ORDER

### Purchase Order ID PO18936

Purchase Order Date 1/24/13 PO Print Date 1/24/13

Certification required -YES

NO

					Pag	ge Number 4 of 4	
Order From: THYSSENKRUPP MATERI O/A VPK METAL- C/O T27 TORONTO, ON M5W 5V8 CA			C-COP001 AL"A"				
Contact Name Vendor Phone 905 669 9 Vendor Fax 905 738 9 Vendor Account Nbr				sition Nbr esale Nbr	Chantal Lavoie  10127-2607  Net 30  CAD  Destination-Collect		
6 M6061T6B2.000X08.000	Spe 6061-T6 BAR 2 8.00"	cial Inst:	SAME AS ABOV 1/30/13 No	E 12.00		\$37.6667	\$452.00
7 M6061T6B1.500X02.500	Spe 6061-T6 Bar 1.5	cial funt:	SAME AS ABOV 1/30/13 Yes	E 36.00 f	Yours ppd	\$8.8333	\$318.00
	Spe	cial nst.	SAME AS ABOV	E	PO T	Γotal:	\$2,915.61
					8	P13-	01-3
				MATERIA REQ'D I	L CERTIFICATION DELIVER	ON Y	
			N	Co	consent.	ution or deviation	

Change Date: 1/24/13